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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,106	08/30/2001	Jose Joaquin Garcia-Luna- Aceves	UC2000-352-2	2114

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EXAMINER	
BHANDARI, PUNEET	
ART UNIT	**PAPER NUMBER**
2666	

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/945,106	ACEVES ET AL.	
	Examiner	Art Unit	
	Puneet Bhandari	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 August 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *14-26 and 39-51* is/are allowed.

6)☒ Claim(s) *1-4,8,9,27-29,33 and 34* is/are rejected.

7)☒ Claim(s) *5-7,10-13,30-32 and 35-38* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08/30/2001* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/15/2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **1-3,** are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al (US 6,757,248).

Regarding claim **1**, a method of differentiating-congestion related packet loss versus random packet loss in a wireless data connection is anticipated by "*Fast Recover Plus algorithm to distinguish packet losses in wireless network due to BER and congestion"* disclosed in column 11, lines 29-35, comprising:

Monitoring changes in the length of a transmission queue in a wireless data connection is anticipated by *"flow control mechanism"* disclosed in column 11, lines 5-16;

Designating packet loss as being due to congestion if said packet loss is preceded by an increase in the queue length is anticipated by *"queue overflow"* disclosed in column 11, lines 8-16; or *"paroxysmal loss"* disclosed in column 12, lines 2-3.

Designating packet loss as random loss if said packet loss is not preceded by an increase in the queue length is anticipated by *"packet loss due to BER"* disclosed in column 11, lines 8-28 or *"sporadic loss"* disclosed in column 12, lines 2-3.

Regarding claims **2,** applying a collision avoidance algorithm if the packet loss is due to congestion is anticipated by "*when the packet loss is due to congestion"* column 11, lines 25-28 or column 12, lines 16-20.

Regarding claims **3,**collision avoidance algorithm comprises reducing the senders transmission window by one half is anticipated by *"avoiding congestion by reducing by the congestion window to half"* column 15, lines 1-8.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims **4, 27-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al (US 6,757,248) in view of Ghani et al (US 6,215,769).

Regarding claims **4 & 27**, Li et al (US 6,757,248) teaches all the limitation of claim 4 (see 102 rejection for claim 1 above) except Li et al (US 6,757,248) does not expressly disclose method further comprising, monitoring changes in the length of said queue over an interval substantially equal to the amount of time it takes to transmit a widow of data packet and receive acknowledgements corresponding to all the data packet transmitted in the window. Ghani et al (US 6,215,769) discloses a method for

monitoring changes in the length of said queue over an interval substantially equal to the amount of time it takes to transmit a widow of data packet and receive acknowledgements corresponding to all the data packet transmitted in the window (see column 7, lines 65 –67 and column 8- lines 1-25, also refer fig 3 and 4 of Ghani et al (US 6,215,769)). At the time invention was made it would have been obvious to one in ordinary skill in art to modify the method for differentiating congestion-related packet loss versus random packet loss in a wireless data connection of Li et al (US 6,757,248) by adding monitoring method of Ghani et al (US 6,215,769). One in ordinary skill in art would have been motivated to do this to adjust the effective transmission rate of the source (see column 7, lines 45-47 of Ghani et al (US 6,215,769)).

Regarding claim **28,** Li et al (US 6,757,248) also teaches applying a collision avoidance algorithm if the packet loss is due to congestion is anticipated by " *when the packet loss is due to congestion"* column 11, lines 25-28 or column 12, lines 16-20.

Regarding claim **29,** Li et al (US 6,757,248) also teaches collision avoidance algorithm comprises reducing the senders transmission window by one half is anticipated by *"avoiding congestion by reducing by the congestion window to half"* column 15, lines 1-8.

5. Claims **8-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al (US 6,757,248) in view of Tam (US 6,622,172).

Regarding claim **8**, Li et al (US 6,757,248) teaches all the limitation of claim 8 (see 102 rejection for claim 1 above) except Li et al (US 6,757,248) fails to disclose method further comprising determining whether congestion is developing in forward or

reverse path of the connection. Tam (US 6,622,172) teaches a method to determine congestion in asymmetric link (see column 10, lines 1-44). At the time invention was made it would have been obvious to a person in ordinary skill in art to modify the method for differentiating congestion-related packet loss versus random packet loss in a wireless data connection of Li et al (US 6,757,248) by adding the method for determining whether congestion is developing in forward or reverse path of the connection. One in ordinary skill in art would have been motivated to do this to provide a solution to congestion problem associated with any asymmetric network (see column 9, lines 54-60 of Tam (US 6,622,172).

Regarding claim **9**, Li et al (US 6,757,248) in view of Tam (US 6,622,172) teaches all the limitation of claim 9 (see 103 rejection for claim 8 above) except Li et al (US 6,757,248) fails to disclose method comprising isolating forward throughput from congestion in the reverse path. Tam (6,622,172) teaches a method for isolating forward throughput from congestion in reverse path (see column 10, lines 17-44). At the time invention was made it would have been obvious to a person in ordinary skill in art to modify the method for differentiating congestion-related packet loss versus random packet loss in a wireless data connection of Li et al (US 6,757,248) by adding the method for isolating forward throughput from congestion in reverse path of the connection. One in ordinary skill in art would have been motivated to do this to provide a solution to congestion problem associated with any asymmetric network (see column 9, lines 54-60 of Tam (US 6,622,172).

6. Claims **33-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al (US 6,757,248) in view of Ghani et al (US 6,215,769) as applied to claim 27 above, and further in view of Tam (US 6,622,172).

Regarding claim **33**, Li et al (US 6,757,248) in view of Ghani et al (US 6,215,769) teaches all the limitation of claim 33 (see 103 rejection for claim 27 above) except Li et al (US 6,757,248) in view of Ghani et al (US 6,215,769) fails to disclose method further comprising determining whether congestion is developing in forward or reverse path of the connection. Tam (US 6,622,172) teaches a method to determine congestion in asymmetric link (see column 10, lines 1-44). At the time invention was made it would have been obvious to a person in ordinary skill in art to modify the method for differentiating congestion-related packet loss versus random packet loss in a wireless data connection of Li et al (US 6,757,248) and Ghani et al (US 6,215,769) by adding the method for determining whether congestion is developing in forward or reverse path of the connection. One in ordinary skill in art would have been motivated to do this to provide a solution to congestion problem associated with any asymmetric network (see column 9, lines 54-60 of Tam (US 6,622,172).

Regarding claim **34**, Li et al (US 6,757,248) in view of Ghani et al (US 6,215,769) and Tam (US 6,622,172) teaches all the limitation of claim 34 (see 103 rejection for claim 33 above) except Li et al (US 6,757,248) in view of Ghani et al (US 6,215,769) fails to disclose method comprising isolating forward throughput from congestion in the reverse path. Tam (US 6,622,172) teaches a method for isolating forward throughput from congestion in reverse path (see column 10, lines 17-44). At the time invention was

made it would have been obvious to a person in ordinary skill in art to modify the method for differentiating congestion-related packet loss versus random packet loss in a wireless data connection of Li et al (US 6,757,248) and Ghani et al (US 6,215,769) by adding the method for isolating forward throughput from congestion in reverse path of the connection. One in ordinary skill in art would have been motivated to do this to provide a solution to congestion problem associated with any asymmetric network (see column 9, lines 54-60 of Tam (US 6,622,172).

Allowable Subject Matter

7. Claims **14-26,39-51** are allowed.

8. Claims **5-7,10-13, 30-32, 35-38** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Puneet Bhandari whose telephone number is 571-272-2057. The examiner can normally be reached on 9.00 AM To 5.30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PB

Puneet Bhandari
Examiner
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